

- 1 -

piece 1, NC_000913, nlpA_yicS-, config: linear, direction: -, begin: 3838267, end: 3837997

5' * *3838260 * *3838250 * *3838240 * *3838230 * *3838220 * *3838210 * *3838200 * *3838190
- glu - asn - lys - gln - lys - ile - ser - ser - ser - val - val - gly - phe - met - asp - ser - thr - phe - tyr - lys - cys - val - ser - asn - glu - ala - fMet - cys - ile - glu -
- lys - - - fMet - ser - leu - val - ser - trp - ile - gln - pro - phe - thr - asn - val - tyr - arg - met - lys - his - lys - cvs - ser - leu - leu -
lys - - - fMet - ser - leu - val - ser - trp - ile - gln - pro - phe - thr - asn - val - tyr - arg - met - lys - his - lys - cvs - ser - leu - leu -

...] NC_000913.yics



sd-(9)-ir 3838208 Gap 2.3 bits
sd-ir 3838208 nlpA_yicS- total 6.8 bits

5' * *3838180 * *3838170 * *3838160 * *3838150 * *3838140 * *3838130 * *3838120 * *3838110 3'
- - - fMet - leu - tyr - glu - thr - arg - leu - arg - gly - gln - lys - fMet - pro - asp - phe - ile - phe - his - phe - tyr - ser -
- ser - ser - leu - ser - ser - cys - cys - thr - lys - arg - ala - cvs - val - val - ser - lys - lys - cys - cys - thr - leu - tyr - ser - thr - phe - ile - pro -

... p35 4.4 bits p10 2.6 bits p35 4.8 bits

p35-(22)-p10 3838129 Gap 2.3 bits
p35-p10 3838129 total 4.6 bits
p35 3.4 bits p10 2.4 bits
p35-(23)-p10 3838123 Gap 1.4 bits
p35-p10 3838123 total 4.4 bits
p10 6.5 bits

p35-(24)-p10 3838122 Gap 2.4 bits
p35-p10 3838122 total 7.5 bits
p35 4.7 bits

... p35-(22)-p10 3838102 Gap 5.5
... p35-p10 3838102 total 5.5
... p35-(23)-p10 3838101 Gap 5.9
... p35-p10 3838101 total 5.9
... p35-(25)-p10 3838099 Gap 6.7
... p35-p10 3838099 total 6.7

5' * *3838100 * *3838090 * *3838080 * *3838070 * *3838060 * *3838050 * *3838040 * *3838030 3'
- phe - leu - phe - leu - ser - ile - ala - phe - arg - phe - leu - asn - arg - ser - asp - leu - thr - ala - ile - val - arg -
- phe - tyc - ser - tyr - arg - lys - fMet - pro - asp - phe - ile - phe - his - phe - tyr - ser - thr - phe - ile - pro -

... orf 41 codons p35 5.6 bits p10 5.9 bits ... sd

... p35-(24)-p10 3838087 Gap 2.4 bits
p35-p10 3838087 total 4.4 bits
p10 2.6 bits p10 2.0 bits p10 6.0 bits

|-----| p35-p10 3838050 total 9.0 bits

... sd-(9)-ir 3838016 Gap 5.5
... sd-ir 3838016 nlpA_yicS-

```
... } p35-(22)-p10 3838102 Gap 2.3 bits
... } p35-p10 3838102 total 5.5 bits
... } p35-(23)-p10 3838101 Gap 1.4 bits
... } p35-p10 3838101 total 5.9 bits
... } p35-(25)-p10 3838099 Gap 4.0 bits
... } p35-p10 3838099 total 6.7 bits

5' a t a a a a a a t g a a a c t g a c a a c a c a t c a 3'
      *3838020   *     *3838010   *     *3838000
      fMet - lys - leu - thr - thr - his -
      sd [----- ... NC_000913.nlpA

... } sd-(9)-ir 3838016 Gap 2.3 bits
... } sd-ir 3838016 nlpA_yicS- total 18.1 bits
... } ir nlpA_yicS-
```

The diagram illustrates a bacterial promoter region. At the top, four transcription start sites are indicated by red dots above the sequence: *3838020, *3838010, and *3838000. Below these, the DNA sequence is shown with codons: fMet, lys, leu, thr, thr, his. A green box labeled 'sd' represents the ribosomal binding site, positioned upstream of the start sites. The sequence is flanked by brackets indicating gaps: p35-(22)-p10, p35-p10, p35-(23)-p10, p35-p10, p35-(25)-p10, p35-p10, sd-(9)-ir, sd-ir, and ir. The total length of the sequence is 18.1 bits. The entire region is annotated as NC_000913.nlpA.